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Front Cover photo by SSgt. Shane Cuomo



PREVENTABLE DEATHS

As of press time, Air Combat Command (ACC) has experienced 12 off-duty deaths. Each death is a family tragedy and means the loss of a valuable ACC team member. Virtually all of ACC's off-duty fatalities fall in one of three categories:

- 1) Vehicle accidents where seat belts are not worn
- 2) Drinking and driving
- 3) Driving a motorcycle too fast in curves

They are all preventable!

It is easy to find excuses why we don't find ways to prevent these senseless mishaps. What it takes is the time and effort of commanders and supervisors. It also takes front line supervisors getting involved with their subordinates and knowing them well enough to make a difference in their propensity to be reckless. Additionally, it takes a buddy getting the keys from a

friend that has been drinking or refusing to move a motor vehicle until all the seat belts are buckled.

I challenge each and everyone in ACC to be the kind of leader that makes a difference in the lives of others. Let's stop these senseless deaths.

Colonel Kevin W. Smith Chief of Safety



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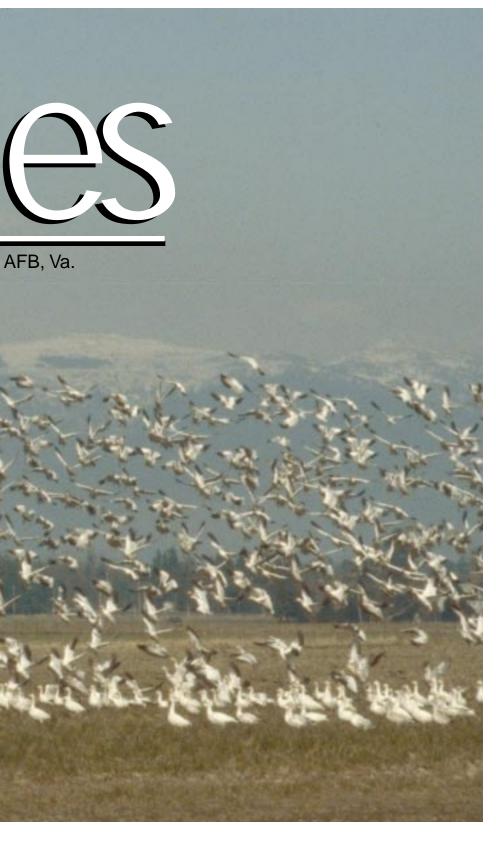


efore jets, before Orville and Wilbur, even before Daedalus and Icarus, our fine-feathered "friends" frequently flew freely (how's that for alliteration?) through the skies above. There's no deny-

ing the basic facts that *they* were there first, and they always have and always will outnumber us. In spite of this, pilots still cling to the "possession's nine-tenths of the law" notion that we have

some kind of exclusive right to the airspace directly in front of our aluminum birds.

I'd wager that anyone with even 50 hours of flight time has had at least one close encounter with an avian aviator, and any-



one with over 500 hours has probably had a bird strike. Thanks to Newton's Laws, most bird strikes — while "cat" astrophic for "Tweety" — are non-damaging to aircraft and crews. However, you've all heard of, read about, and

maybe even seen gory pictures of those mishaps where either the bird's mass or the aircraft's velocity — or both — produced deadly results.

Bird Aircraft Strike Hazard or BASH prevention is taken

very seriously by all aviation communities: civilian, military, fighters, heavies, and trainers. While threat exposure varies widely between each, the risk each and every day is real and ought to be assessed and mitigated on a continuous basis. Today's high-tech world allows flight crews to get not only incredibly detailed weather, but bird forecasts as well. The highcost expense of aircraft and engines obliges us to know all we can about both before we step to the jet.

In over 3,400 hours of flying, I've experienced many, many "near misses" and a few — as George Carlin would say — "really good hits." While none were particularly notable, enlightening, or instructive, recounting them will not only be entertaining, but may also add to your capital "A" airmanship as they did to mine ...

The first was in a CT-39 during a dawn takeoff out of Maxwell AFB, Ala., departing over crop and wetlands. How many warning flags can you see already? A large flock of white egrets let us know we had rudely interrupted their morning routine. The left seat pilot and I knocked 'noggins' as we both "ducked" (pun intended) below the glare shield. We both later wondered how the safety report would have read if we had both been rendered unconscious and crashed without having hit a single bird! Lesson learned: Pre-brief your intended actions in anticipation of/immediately after a bird strike. It may save your life!

The second was in B-1Bs deployed to Moron Air Base, Spain, making multiple inert bomb runs on a range made



infamous by F-4, F-111, and F-16 Class A's with resident, pterodac-

tyl-size condors. Ignorance was blissful during the first pass, but as we rolled in on the initial point for our sec-

ond, we saw what appeared to be a spiral formation of high-wing Cessnas. We chose to remain at altitude and withheld the bombs on our third run which we unanimously voted would be our last. Kenny Roger's conventional wisdom, "You've gotta know when to hold 'em, know when to fold 'em, know when to walk away, and know when to run" clearly has applicability to aviation scenarios. We didn't hesitate to call "knock-it-off," notify the range controllers of the potential hazard to subsequent aircrews, and return to base with our ordnance.

The third was in a T-37 at Sheppard AFB, Texas, right after entering a local low-level route ... "ready, ready, hack." We were just about to go into

threading the proverbial needle was "really cosmic." Despite these "good signs," we aborted the route, called the supervisor of flying, got a chase ship to perform a battle damage assessment, and flew a straight-in approach to a full-stop, lowering our flaps in gradual increments. Another case of acting like an old pilot instead of a bold one, but conservative operational risk management decisions are

age to any leading edges, and the international student pilot thought that our

usually the best. Additionally, always looking outside and

"Most bird strikes occur below 2,000 feet and during takeoff and landings"

the usual repertoire of "clock to map to ground" when a black cloud of grackles, numbering more than Alfred Hitchcock's wildest fantasies, "warped" by our giant dog whistle. The visual effect was that of the negative image of entering hyperspace in Star Wars. My left hand — mil power; my right hand — instantaneous 4G pull; my eyes — instinctive reflex closed. Guess I forgot about the instructor pilots' "secret" last-ditch technique of applying right rudder (just kidding ... no, really!). After I consciously willed my eyelids open, I saw that both engines were running, there was no visible damclearing in the direction you're headed might not be bad advice either!

There you have it: three reallife examples ... good, bad, and potentially ugly. You figure out which was which. While most bird strikes occur below 2,000 feet and during takeoff or departure and approach or landing phases of flight, no one is ever completely immune from this hazard. The National Audubon Society revoked my membership a long time ago. Try to keep yours intact by respecting two immutable laws — they (the birds) were here first and there's a lot of 'em everywhere — as you continue to fly safely!



uring a daily airfield Bird Aircraft Strike Hazard (BASH) inspection, you might see a series of wildlife activities that may present themselves as hazards. Perhaps a large flock of red-winged blackbirds is foraging in the infield grass; seagulls are gliding past taxiways en route to the local feeding areas; a red-tailed hawk, perched atop a distance remaining marker, is awaiting an opportune time to retrieve the next meal; and maybe even a red fox is sitting beside an abandoned drainage pipe curiously observing an F-15 Eagle taxi down the runway. Situations such as these on an airfield are not uncommon and, unfortunately, can pose a significant threat to safe flying operations.

It is well known that managing wildlife on and near an airbase is not an easily solved problem. An integrated ap-

proach that incorporates both active and passive control methods is necessary for successful wildlife mitigation on an airfield. Active control measures generally produce short-term relief of immediate hazards by employing dispersal tactics that include pyrotechnics, gas cannons, electronic distress calls known as bioacoustics, and other techniques. Passive control measures focus on long-term hazard prevention by eliminating refuges or controlling attractants such as vegetation, artificial food sources, and other environmental variables. Flight operational considerations, such as Bird Watch Condition Codes or BWCCs and Bird Avoidance Models or BAMs, are used in risk management decisions to reduce wildlife strikes. However, another component of a wildlife strike hazard reduction program is sometimes overlooked: accurate monitoring and recording of wildlife observations and control activities on an airfield.

Monitoring and documentation of wildlife activity on and near the airfield environment is essential for a successful BASH program. A wildlife hazardmonitoring program will measure the effectiveness of wildlife control techniques, while detecting changes in wildlife populations and habitat use that pose a threat to aviation safety. For instance, it can be used to learn about local bird activities; help predict migratory and daily feeding flights of major migrant species; identify locations of airfield attractants (wetlands, ditches, tall vegetation, etc.); establish major wildlife trends (where, when, why); and justify the costs of control programs (personnel hours, equipment, etc.). Accurate documentation of wildlife activity is also needed to justify



implementation of costly or controversial mitigation practices or issuances of depredation permits. In addition, it could provide valufied for use on an airbase. Bird surveys should be standardized (i.e., easily repeatable and offer the same opportunities to ob-

Tracking wildlife activity is *essential* for a successful BASH program

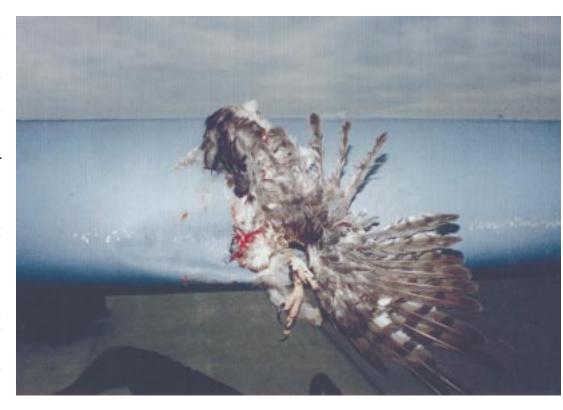
able information to an accident investigation.

There are various monitoring methods and documentation techniques that can be tailored to meet the needs of a specific BASH plan. See the inset for a wildlife survey that can be modiserve birds) to ensure that results obtained at different times are comparable. Establishing a set of fixed observation points on and near the airfield is an important step towards standardization. Make sure these positions provide a clear view of the aircraft

operating area, including approach and departure zones, and potential wildlife attractants. To ensure further standardization, observe wildlife for 5-minute intervals at each monitoring point, two to four times throughout each day (i.e., dawn, mid-day, and dusk), and document key factors. Important information to note is the time, species observed (be accurate!), number observed, location, behavior, habitat observed in and any other relevant comments. Essential tools include a bird identification field guide, a map of the airfield with a superimposed grid system for locating birds, and a pair of binoculars. To establish baseline information on daily and seasonal changes in bird activity, bird surveys should be conducted 2 to 4 days each month for a year.

It is also important that your BASH program documents the control measures used to mitigate wildlife hazards. A control log should be generated to document wildlife control measures or miscellaneous observations. Control log forms should be distributed among individuals responsible for conducting daily BASH inspections and dispersal efforts. The survey form should be filled out on-site using an identification field guide. It is also a good idea to standardize the terms used to complete the forms so that data collation is easier to accomplish. When filled out regularly and properly, it gives an indication of problem species, wildlife attractants, the time expended on specific wildlife control measures, and the effectiveness of the measures employed.

A wildlife hazard-monitoring program should incorporate both standardized airfield wildlife surveys and wildlife control logs. Together this data can be used to analyze the effectiveness of a BASH program. The longer the period over which these records are maintained, the more effective they will be in detecting trends in population growth, behavior, and evaluating the success of control measures. Continued monitoring will provide specific flight hazard identification that will aid in developing a more effective BASH program. For assistance in establishing a wildlife hazardmonitoring program, contact the U.S. Air Force BASH team located at the Air Force Safety Center or your state's local division of the U.S. Department of Agriculture Wildlife Services.



Airfield Wildlife Surveys & Control Logs

Airfield wildlife surveys and wildlife control logs are important and should record the following:

- Date and time of the observation or action. Emphasizing the date and time is a means of identifying seasonal trends.
- Weather conditions (sunny, cloudy, raining, etc.). Species behavior may be predicted by comparing weather patterns.
- Bird watch condition (Low, Moderate, or Severe). The declared bird watch condition is based on airfield bird activity at the time of observation or control method implementation.
- Wildlife species observed and the approximate number. An identification field guide should always
 be used to ensure positive identification of the wildlife species observed. This will ensure the identification
 of species' specific hazards.
- Location (runways, infields, outfields, etc.) and habitat (short grass, long grass, wetland, etc.) of wildlife on the airfield. Repeated reports of wildlife observations and control activities in certain areas may prompt an investigation to identify specific wildlife attractions.
- Wildlife activity (loafing, flying, feeding, etc.). This records the animals' behavior during an observational event or control method implementation.
- Control actions implemented and the immediate effects (pyrotechnics, gas cannons, or bioacoustics). The exact method or technique that is used should be stated here along with a concise description of the effectiveness of the control method that was used.



everal years ago I found myself occupying the jump seat of a KC-135A on approach to Keflavik Naval Air Station, Iceland. My first deployment as a young copilot seemed to be going without a hitch — as if I really knew.

The crew consisted of another copilot, an Instructor Pilot (IP), two boom operators, and myself. We had checked the weather prior to descent and determined that, while there were

several storms blowing through Iceland, they tended to pass quickly and the weather was above minimums for our approach. We based this decision on the weather reports the deployed Supervisor of Flying (SOF) was relaying to us from the station.

As we departed the final approach fix, we experienced moderate turbulence, light icing, and thick clouds. This was the first time the little people in my head began to fight, whispering

things like, "No problem ... the IP can handle it!" "Is this what the SOF thinks is OK?" "Don't worry. We'll break out soon."

The next 200 feet woke me up from my mental gymnastics and literally shocked me into reality. A very bright flash, accompanied by the loudest clap of thunder imaginable, shook the jet and the crew out of our state of catatonic bliss. In my mind everything stood still — no one moved for what seemed like 20 or 30 seconds, but was



The "Comm" Between Storns

By Maj. Jeffrey S. Schwoob, Robins AFB, Ga.

quadrant, everything was just dandy.

At this point the IP elected to discontinue the approach, climb to holding, and determine the severity of the noise-producing malfunction. About the same time, the SOF advised us that weather conditions on final had severely deteriorated and suggested we divert to Mildenhall Air Base, England.

As we climbed out, on an initial heading toward our alternate, we suspected something had happened to our nose dome. but could not ascertain the severity of the damage. We later learned it was a 12-inch hole. Based on various speculations, the IP questioned the wisdom of flying to Mildenhall with a damaged aircraft while we still had the option of holding until the weather blew over. The SOF confirmed his rationale when he told us the storm had passed and the next one wasn't scheduled to arrive for 20 to 30 minutes.

We turned around, shot the approach, and landed in strong, gusty crosswinds — a staple for Keflavik. Our timing was amazing because within 3 minutes of evacuating the aircraft, the vis-

ibility went to zero, the crosswinds went way out of limits, and the runway was iced over.

My first deployment had taught me many lessons, but the most valuable lesson was about communication skills. The crew coordination that took place during this episode played a significant role in landing the aircraft safely. The IP did an excellent job landing the aircraft in challenging weather; but, more importantly, he organized our crew and assigned duties to expedite our recovery. Without this delegation and the trust he had that each of us would accomplish our assigned duties, the outcome might have been completely different.

Some of the crew wanted to continue to Mildenhall where the weather forecasts were better, the per diem was higher, and there was no alert duty. However, once the decision was made to make another attempt for Keflavik, the crew made it happen. Fortunately for the crew, the IP expertly used his communication and organization skills to focus the crew on what was important — landing the aircraft safely.

probably no more than 2 seconds. I verbalized my first conscious thought, which was that we were still flying. My voice seemed to bring the crew to life, and everyone began to respond to the emergency.

We knew we had been hit by lightning. When we realized we were all still alive, we quickly analyzed the aircraft to determine if anything significant had been destroyed. Except for a very loud wind, howling beneath the throttle





pril 20, 1994, was my wife's 25th birthday, but it passed without a celebration. It's not that I don't love my wife; I killed her by driving drunk.

I am writing this story from my jail cell. In addition to the devastation of losing my wife, I was court-martialed, received a bad-conduct discharge, 1 year of confinement, forfeiture of \$550 a month for 12 months, and a reduction in grade to airman basic.

Like many couples, we had a promising future. We had a

beautiful marriage and satisfying jobs at Misawa Air Base, Japan. I had been selected for promotion to staff sergeant and to participate in the annual Gunsmoke competition. Though we had been married slightly more than a year, we had traveled to places others only dreamed about. We looked forward to a life in the U.S. Air Force and all the benefits that accompanied it. However, on Nov. 7, 1993, "I threw it all away!"

That night, I decided to drive my wife home after a night of

drinking and dancing. "I'm not drunk" ... or so I thought. But in reality, I was drunk and drove home in that condition. Sadly, that night was the last time I ever saw my wife alive.

On the way home, I foolishly tried to keep up with a friend who had been speeding in another car. I lost control of my car and slammed into a concrete utility pole. My wife was ripped from the car and thrown head first into the concrete pole as the passenger side was completely demolished. She died violently.



Drinking and the Prom ... A Dangerous Mix

By Alvin Poussaint, M.D. and Susan Linn, Ed.D.

R ecent statistics only affirm parents' concerns about teenage consumption of alcohol — and prom night has been seen, in recent years, as a drinking rite of passage for some adolescents:

- Ninety percent of all crime on college campuses, including rape and murder, is alcohol-related.
- Nearly a third of all high school seniors report binge drinking (five or more drinks in a row).
- Nearly a third of teenagers report regular drinking (drinking on more than two occasions in the past month).

Talk to your teens about the consequences of drinking — diminished judgment, becoming more uninhibited, nausea, vomiting, hangovers, irritability, and sleep disturbances. Drinking too much, too rapidly can cause alcohol toxicity that leads to loss of consciousness and sometimes death.

For more information visit http://familyeducation.com/

Military DUI Limits Have Changed

The FY02 Authorization Act significantly changed Driving Under the Influence (DUI) limits as of Dec. 28, 2001. Now the legal limit for a military DUI will match whatever the limit is in the state in which the offense occurs. The DUI limit in most states is 0.08 blood alcohol content.



her life and the lives of others? She did not deserve to die that way. No one deserves that. If I was speeding and failed to neyou had ever met my wife, you would have known she was full of life and happiness. She was seldom seen without her beautiful smile. But now, no one will ever see her smile again.

Drinking affects your judgment. I thought I knew my limit when it came to alcohol. That night, I consumed a bottle of wine, a couple of beers, and a soju-based mixed drink in approximately 4

Who was I to play God with cohol would affect my judgment. I was wrong.

On the night of the accident, gotiate a curve I knew like the back of my hand. Driving requires your best judgment and reflexes. Unfortunately, alcohol took mine away that night; and that took my wife away ... forever.

If there is a lesson to be learned from this tragedy, it is this: Don't Drink and Drive! You will eventually get caught. If you are fortunate, you'll only have to pay a fine or have your this article off and say, "It hours. I didn't think I was driving privileges revoked. drunk, nor did I think the al- However, there is a good pos- differ.

sibility you may end up like me - a convicted felon with an uncertain future. My wife is dead and so is my career. It will be virtually impossible for me to find meaningful employment and obtain credit after my release from jail. On the balance, my sentence is a small price to pay for the lives I destroved.

Unfortunately, my wife never had a say in what happened; and she paid the ultimate price for my crime. For those of you who would shrug won't happen to me," I beg to



HH-60G Pave Hawk



Primary Function: combat search and rescue and military operations other than war in day, night, or marginal weather conditions. Builder: United Technologies/Sikorsky Aircraft Company Power Plant: Two General Electric T700-GE-700 or T700-GE-701C engines Thrust: 1,560-1,630 shaft horsepower, each engine Length: 64 feet, 8 inches Height: 16 feet, 8 inches Rotary Diameter: 53 feet, 7 inches Speed: 184 mph Maximum Takeoff Weight: 22,000 pounds Range: 445 statute miles; 504 nautical miles (unlimited with air refueling) Armament: Two 7.62mm machine guns Unit Cost: \$10.1 million (1992 dollars) Crew: Two pilots, one flight engineer and one gunner Date Deployed: 1982 Inventory: Active force,

Monthly and Quarterly Award Winners

Ground Safety Award of Distinction

n Dec. 7, 2001, Shaw Air Force Base, S.C., was in day three of a local operational readiness exercise. Flying was moderate to heavy with 16-hour flying windows each day. A flight of four F-16s, call signs King 51 through King 54, took off during the first launch of the morning wave. The departure, climb out, and initial cruise were uneventful. Approximately 5 minutes after the flight departed, King 53 experienced an engine oil pressure gauge fluctuation and immediately turned back toward the airfield. He declared an emergency with the Radar Approach Control (RAPCON) and intended to fly simulated flameout procedures to a full stop on the runway. The base tower became aware of the situation when the RAPCON watch supervisor called with the emergency notification and established communications with King 53. Transmissions between the pilot, air traffic, and the Supervisor of Flying (SOF) took place over four different frequencies, which compounded the complexity of the situation. The tower watch supervisor corrected this by ensuring all parties remained on the same frequency. The local controller, A1C. Ryan Warren, ensured his departing traffic was not a factor to the inbound emergency and requested King 53 to report "low key." After King 53 reported "low key," Warren cleared the aircraft to land and issued a "check wheels down" call, but got no response from King 53. Warren used his binoculars to acquire the aircraft when it was over the approach end of the runway at approximately 800

feet with a higher than normal airspeed and confirmed that his gear was in the up position. Then he made a second radio call, "King 53, appears negative landing gear" as the aircraft turned wings level and settled down toward the runway. The pilot responded with "gears down now" and landed 7,000 feet down a 10,000-foot runway, engaging the BAK-12 barrier. The exceptional situational awareness, decisive actions, and superb professionalism of A1C. Warren prevented a potentially catastrophic mishap and saved both a \$30 million combat aircraft and its pilot.



A1C. Ryan M. Warren 20th Operations Support Squadron 20th Fighter Wing Shaw AFB, S.C.

Flightline Safety Award of Distinction

n Dec. 27, 2001, MSgt. Lee Walters was inspecting the airfield following a surge of Operation SOUTHERN WATCH departures when he discovered fragments of a blown tire on the edge of the runway. Instead of merely clearing the debris from the runway, he led an effort to identify the fragments, warn pilots, and eventually was responsible for the safe aircraft recovery. Walters suspended runway operations, recovered over 30 pieces of tire, and pieced the fragments together to determine the national stock number. Then he radioed the number back to base operations, along with specific instructions to contact the maintenance operations center and determine the aircraft type. The tire was found to have come from an F-16's main landing gear. Walters then contacted air traffic control and asked the U.S. supervisor of flying to instruct all airborne F-16s to get a visual gear

check for a blown tire on takeoff. Next, he attended to ground preparations for a cable-arrested landing. Because of his prompt and thorough actions, the F-16 was located before mission recovery. This was all done in

enough time to locate an airborne KC-135 tanker that was able to refuel the emergency aircraft, which allowed it to remain airborne while other aircraft landed before the main runway was closed. With the barrier set, the pilot aware, and crash recovery on-scene, the emergency landing resulted in only minor speed brake damage to the F-16. Had this senior noncommissioned officer not initiated and then orchestrated such meticulous preparations, the result could have easily been catastrophic. Sgt. Walters displayed skill and ingenuity above and beyond expecta-



MSgt. Lee D. Walters 347th Operations Group 347th Wing Moody AFB, Ga.

Ground Safety Award of the Quarter

Sgt. Paul Lyons and SrAs. Richard Doud and Ronald Baker exhibited tremendous technical knowledge and dedication to safety during daily vehicle inspections of 15 R-11 refuelers and three C-300 ground refueling units valued at over \$2.8 million. Their upkeep of these vehicles has allowed for the safe delivery of 3.3 million gallons of aviation fuel for 2,287 sorties and 26,786 gallons of ground fuel. This team, normally staffed with four personnel, is the true heartbeat of fuels management. Their in-depth inspections and keen eye for vehicle discrepancies led to the flight maintaining a 93 percent in-commission rate, the highest rate within the last year. Additionally, their outstanding efforts led to the flight earning five consecutive 20th Fighter Wing "Top Wheels" Awards and seven consecutive Outstanding ratings during nonotice inspections performed by the 20th Transportation Squadron. Although preventive maintenance is their primary focus, these multi-talented disciples of safety serve various other roles. As fuels expediters, they resolved deficiencies by making on-the-spot repairs to refuelers, thus preventing fuel mishaps or safety incidents and ensuring uninterrupted fuel support to the wing. They also serve as core task trainers for newly assigned fuels distribution personnel, providing comprehensive training by emphasizing safety. These efforts plant the seed for safety at the earliest opportunity. The team streamlined vehicle inspection checklists by eliminating redundant non-value-added steps, thus reducing discrepancies and inspection time by 20 percent. Awesome troops who epitomize the spirit of Team Shaw. Their infectious attitudes and endless efforts to prevent mishaps and maintain our crucial refueling fleet in top working condition make them invaluable squadron members and most deserving of this award.



SSgt. Paul Lyons, SrAs. Richard Doud and Ronald Baker 20th Supply Squadron, 20th Fighter Wing, Shaw AFB, S.C.

ACC Safety is Proud of All Our Award Nominees

Capt. Peter A. Wenell

RC-135 Instructor Navigator 388th Combat Training Squadron 55th Wing Offutt AFB, Neb.

A1C. Joseph C. Klingler

A-10 Crew Chief 74th Fighter Squadron 23rd Fighter Group Pope AFB, N.C.

A1C. Joshua R. Gosney

Inspection Team Member 60th Fighter Squadron 33rd Fighter Wing Eglin AFB, Fla.

A1C. Jennifer K. Hidle

Air Traffic Control Apprentice 4th Operations Support Squadron 4th Fighter Wing Seymour Johnson AFB, N.C.



Implementing ORM at the Wing Level

By Lt. Col. Jerry L. Gandy, Langley AFB, Va.

would like to share some different ways that Operational Risk Management (ORM) can be successfully implemented at the wing level. For years the Air Force has enjoyed tremendous safety rates; lately, however, those rates have "flat lined." ORM is designed to help us continue the downward trends we were experiencing before. The desired end state is to preserve combat capability through accident reduction. ORM is not a

powerful tool that can positively impact our mission if implemented correctly and that is flexible enough to be used by virtually anyone in the Air Force. What makes ORM such an invaluable decision-making tool is that it enhances the mission at all levels while minimizing risks — all dimensions of risk. ORM adds 'rigor' to the traditional way we have done business. Properly applied, ORM directly contributes to preserving combat

sions and approach any activity — on or off duty."

We, here at the 1st Fighter Wing, have developed a holistic approach to inculcating ORM across the wing without requiring mandatory checks or making it a compliance item. Instead of creating an ORM focus for a single safety down day, we incorporate it in ways that are spread out over time and across our unit. For us, the ultimate check for success is the gut check. When a mis-







ORM is not a program; it is a philosophy.

program; it is a philosophy. We have always had a risk-managed force — now we want to make sure everyone is on the same sheet of music and increase everyone's awareness of the steps involved in controlling risk.

The importance of ORM to our senior leaders is reflected in statements made by our last Air Force Chief of Staff, General Michael E. Ryan: "Operational risk management is a capability by reducing risks consistent with other cost, schedule, and mission requirements. ORM is about smart mission accomplishment — getting the job done right — by proactively managing risks. Commanders and functional program managers must make integration of ORM into day-to-day Air Force operations a priority. The goal is to make risk management a seamless part of the way we make deci-

hap does happen, we have to look in the mirror and determine our culpability (i.e., whether or not we could have controlled the risk and avoided the mishap).

Our wing ORM vision flows from the ORM vision recently laid out by the Commander of Air Combat Command, General Hal M. Hornburg, "I expect each of you to develop and nurture Airmen; to be prepared to deploy when called to



duty; and lastly, to be ready to fight when ordered." We believe one of the keys to reaching those goals is to successfully implement ORM at the wing level.

Our safety vision is to "eliminate ORM failures." The following two goals mark our progress on that path: formalizing risk management into all our processes across the unit and incorporating risk management analysis into all safety investigations. We have developed a threestep action plan to reach these goals.

Step one is to train all key personnel. In order for ORM to be successful, it must be understood and supported from the top. This is done through formal briefings, which directly teach ORM concepts, as well as using seasonal safety briefings to reinforce the concepts.

We started by sending our ground safety manager to the formal, in-depth course at the Air Force Safety Center. We then took advantage of the two ORM distance-learning opportunities (i.e., via live satellite broadcast) offered by the Center to train our senior commanders and supervisors. Next, we spread this knowledge to the rest of the wing through tailored briefings to the squadron officers and enlisted supervisors. We also revised the safety briefing we teach at the flight commander's course to include more emphasis on ORM.

For the seasonal risk management issues, we provided briefings to all wing personnel as well as education on Personal Risk Management (PRM), both on and off duty. We used local community trend data on issues

such as Driving Under the Influence (DUI), vehicle accidents, and water recreation mishaps to illustrate the highrisk potential of these activities. Our theme is "PRM is nothing more than exercising adult common sense." Our wing's progress can be measured by a 75 percent reduction of the DUI rates from last year.

Step two involves determining the need for immediate ORM action and putting some tools in place to prove the utility of exercising ORM. For any philosophy to be accepted, it must prove its worth. Our wing commander decided our maintainers would be our first ORM test bed.

To implement this, we conducted specific ORM training for all the supervisors in the Operations and Logistics Groups. The participants developed a

Top 3-type risk factors checklist for time-critical ORM that maintenance flight commanders and chiefs could use. Furthermore, we standardized our flying Top 3 checklist and added a matrix to the back for actions. We also created a bi-weekly Bird Avoidance Model or BAM briefing for the squadron Top 3s that helps them make low-level flying decisions.

Step three is to measure the wing's performance through trend analysis and to incorporate the risk management lens used in accident investigations during the normal conduct of operations. We will then use that data to identify problem areas that need ORM attention.

We have already found that risks are being identified in areas such as our annual unit inspections. In a recent inspection, we determined that we have a significant Foreign Object Damage or FOD risk factor. While the unit has an effective control mea-

sure in place, it is expensive in terms of manpower costs so we will take a cross-unit look at other control measures that might be more cost effective. We have also determined that several units are at risk for electrical problems and flooding. We will develop a focused spot inspection program to validate those risks and help determine appropriate control measures.

When our wing's mission changed and our operations tempo increased following the events surrounding the attack on



our nation, this provided us with an opportunity to evaluate the resulting risk and take appropriate control measures ... to put ORM into action! The areas of greatest concern were weapons and flying activities. Following some weapons risk analysis, we conducted spot inspections to determine the areas that needed extra supervisor emphasis to prevent mishaps and ensured that all supervisors were aware of the need for vigilance and oversight in those areas. On the flying side, we created an Operation NOBLE

EAGLE-specific Top 3 checklist as well as put out formal guidance through the aircrew read file system.

That is our three-step action plan and how it has worked in a real-world situation to help us achieve our vision of eliminating risk management failures. While our approach could certainly be more formal, we believe that for it to be successful, it must be uncomplicated, understood, used, and seen as beneficial. This plan has what it takes to help us preserve our combat capability.

Preventing Hung Ordnance

By SSgt. Shawn L. Morin, SrA. Anthony T. Tucker, and A1C. Kevin N. Patrick, Pope AFB, N.C.

ur squadron recently deployed 16 A-10s to Nellis Air Force Base, Nev., for an AIR WARRIOR close air support exercise with our neighbors from the 82nd Airborne Division at Fort Bragg, N.C.

Ammo troops deployed early to Nellis to inspect and assemble live munitions including MK-82 general purpose bombs and CBU-87 cluster bombs. The first day of live drops involved the usual activities. Our weapons load crew performed stray voltage checks, loaded the CBU-87s, completed the weapons post load checks, signed off the aircraft forms, and prepared to launch a dozen combat-loaded A-10s into the predawn sky.

Shortly before aircraft taxi time, several pilots called for a weapons redball because their armament control panels failed to sense the presence of CBUs on certain stations. Our weapons load crew responded to the call and checked that the CBU-87 bomb lugs were adjusted correctly to ensure the proper separation distance. We noted that all the lugs had already been adjusted within Technical Order (T.O.) specifications, so our troubleshooting focused on the stores-away switches (sensing switches) in the MAU-40 weapons racks.

When the sensing switch plunger was lifted from the bomb,



the pilots immediately received armament panel indications that the store was present. We continued to research the T.O. and installed sensing switch extenders on the affected racks, in accordance with an "if applicable" option. All the CBU-87s with the sensing switch extenders released and functioned as advertised.

Upon further investigation, we discovered that a year earlier a new type of sensing switch (part number 7938411-10, with replaceable plunger, 79384411-30) had been installed in the MAU-40 to replace the old switch (part number 64C13215-30). Weapons loaders are able to remove this new switch without sending the entire rack to the Armament back shop. While this feature saves time during troubleshooting, we discovered during AIR WARRIOR that other characteristics of the new switch created our problem. The plunger on the new switch is shorter than the old switch. This affects the signals sent to the armament control panel. If the plunger is not sufficiently depressed, the aircraft assumes no store is present.

The discovery of this anomaly was a result of realistic training in a fast-paced, combat-like environment. The limited live-drop opera-

tions we are able to conduct at home station normally involve MK-82s. These bombs depress the sensing switch plunger about 80 percent of its length when mounted on an MAU-40. We learned from the combat loads at AIR WARRIOR that the CBU-87 has a larger diameter and shape, which creates a different relationship between the bomb lugs, sway braces, and sensor switches. When a CBU-87 is properly loaded on the MAU-40, the new (shorter) sensing switch is nearly flush with the bomb body, and may not provide enough plunger depression to signal that the store is present. Result: hung CBU.

It is important to keep the different characteristics of the new sensing switches in mind when dealing with different munitions loads, especially if you don't load them on a regular basis. During peacetime, it will save work and ensure a safer environment. During combat, it will ensure that a pilot can hit the target the first time so that the mission will not have to be repeated. Your alertness and knowledge as a weapons loader is key to the success of both our peacetime and combat operations. It may also save a life.



efensive driving. We hear these two small words all the time, but do we really put them into practice? What will it take for us to do so? I know what it took for me, and I'd like to share that story so that others can hopefully take heed as well.

It happened during my high school years to a friend of mine. Her name was Rebecca — or Becky to her friends — and every one was her friend. She was an only daughter and lived in a rural community. She was everything a parent could wish for. Her grades ensured that she made the honor roll every year. She excelled in all the girls' sports. She had good

looks. She started her senior year as the head cheerleader. When it came time to pick the Homecoming Queen, she was the only real choice.

The night before the Homecoming football game, she finished cheerleading practice late. She needed to be at the dance early for a practice coronation session, but her dress was at home. This meant she had to drive several miles out to the farm, change, and return to the dance.

Please understand, Becky was a good driver. She did not speed even when she was in a hurry. She also did not take any crazy chances. She felt it was better to show up late than dead. She did not, however, prepare herself to anticipate and compensate for the mistakes of other drivers on the road.

As she traveled the country roads to the farm, she came up on a grain truck where the road split into three lanes. The truck driver was in the center turn lane, signaling a left turn. Becky saw the situation and stayed in the right lane to pass the truck on the right as it was making its left turn. That left turn never happened.

As Becky was passing on the right, the grain truck turned right directly into the path of her car. It turned out that the driver had swung left into the center lane to make his right turn easier. Becky had no time to stop even though she slammed on the brakes. The initial impact knocked the rearview mirror off its post on the windshield. Then the right rear corner to the truck's bed pushed that post directly into Becky's head.

How do I know all this? The police report told some of it. The rest I learned from Becky. Yes, she survived. A large portion of her brain is gone along with some precious memories. It took years of extensive therapy for Becky to be able to walk and talk almost normally. She did finally graduate high school, but she will never run, do a cartwheel, or perform her cheerleading

gymnastic routines again. And all of this happened because she did not put her defensive driving skills into practice. It was a momentary lapse that has cost her and her family dearly.

It has taken me a few years, but I have come to greatly value the lessons I learned from Becky. Driving defensively is a necessary skill. We all must be prepared for the mistakes of others on the road and give ourselves the time and space required to react safely. I find that I now avoid situations where I might have to use my emergency driving skills.

This has become an automatic reaction on my part. I watch the other drivers when I'm out on the road — and not just

their cars. A driver's body language can give you a lot of clues as to what their next move might be. As I am driving along, I try to see potential problems and analyze all of the risks associated with each one. I then give myself enough room to avoid getting entangled in as many as I possibly can. It's a second-by-second risk management technique that helps me arrive alive and healthy at my next destination. After all, I've got a granddaughter at home who is counting on me being there for her. Who is counting on you?



Are You Making Any of These Top 10 Driving Errors?

Courtesy of the Air Force Safety Center and Utah Safety Council

- 1. Not looking carefully for oncoming traffic.
- 2. Pulling out to pass without checking for traffic in the passing lane.
- 3. Pulling out of a parking space without looking back for oncoming cars.
- 4. Excessive speed.
- 5. Inattention.
- 6. Making no attempt or an unsuccessful attempt to steer around an impending crash.
- 7. Internal distraction (i.e., a crying baby, talking on a cell phone, adjusting the radio or tape player, etc.).
- 8. Inadequate defensive driving.
- 9. Making an incorrect assumption about other drivers' intentions.
- 10. Improper maneuvering or driving in the wrong direction or lane.

A On't Leave Me On't Leave Me

By SSgt. William S. Gottlieb, Seymour Johnson AFB, N.C.

27-year-old senior airman from Seymour Johnson was riding his bike with another motorcyclist early one evening. During the ride, an animal darted out of the woods and crossed the road, directly into the path of the airman's motorcycle. He was going 50 to 55 miles per hour when he struck the animal, which created enough force to throw him over the handlebars of the motorcycle. The airman slid about 30 yards down the road on his back, hand, and elbow.

When the emergency medical team responded to the accident, the airman told them that he was able to seek his own medical attention so they departed the scene. Shortly after

then went to seek medical treatment.

The airman was wearing all the proper protective gear required by Air Force Instruction (AFI) 91-207, Air Force Traffic Safety Program: helmet, gloves, boots, and protective riding clothing. As a result, he sustained a broken left thumb, broken right ankle, and skin abrasions on his wrist. While his protective gear minimized the damage that was done, these injuries were serious enough that the airman should have gone to the hospital with the paramedics for immediate medical attention. An injured person should not base medical care decisions on his or her own judgment following a mishap. You are not trained to predict

shock. Shock is a life-threatening condition that requires immediate medical treatment. Some degree of shock can accompany any type of medical emergency. The injured person needs continual monitoring even if the injury seems minor because shock can worsen verv rapidly.

While this airman let his guard down about shock, he knew the requirements for motorcycle riding and followed them to protect his own life.

For motorcycle, motor scooter, and moped operations on Air Force installations and for operation by military personnel off Air Force installations, the requirements include:

- Headlights must be on unless prohibited by the Status of Forces Agreement or local laws.
- The vehicle must have rearview mirrors.
- The operator and any passenger must wear a protective helmet, impact-resistant goggles, or a full-face shield on their helmet.
- A brightly colored or contrasting vest or jacket must be worn as an outer upper garment during the day, and a reflective outer upper garment at

Once the airman was alone, he realized that he was starting to go into shock ...

this, the second motorcyclist left the airman to get a truck so they could haul the damaged motorcycle home. Once the airman was alone, he realized that he was starting to go into shock, so he flagged down a vehicle and asked them to stay with him until his friend returned which happened about 40 minutes later. The airman

or detect the complications that can occur after what seems like a minor injury. The airman did not account for the shock that he experienced, and it could have cost him his life.

When a mishap occurs, it is imperative that someone stays with the person or people who get injured to ensure that they do not go into



night. The outer upper garment must be clearly visible and not covered.

• Long-sleeved shirts or jackets, full-fingered motorcycle gloves or mittens, and long trousers must be worn.

People interested in buying a motorcycle, or those who already have one and need some refresher on motorcycle requirements, should review AFI 91-207. All Air Force military personnel, who operate a motorcycle on or off duty and on or off a military installation, must attend an approved motorcycle safety course regardless of their decision to register the vehicle on a military installation. Government civilian personnel must also attend an approved course if they ride a motorcycle on duty and on or off the installation. Retirees, contractors, dependents, and all other non-Air Force civilian personnel who operate a motor-

cycle on an Air Force installation are strongly encouraged to attend an approved motorcycle riding safety course.

Again, it is your responsibility to know what hazards are associated with the activities you engage in and to take the steps necessary to protect yourself. Our military and social structures cannot afford the loss of any one person. For more information on motorcycle mishap prevention, contact your base Safety office.

Jogging for Life

By Ms. Gale R. Gendron, Langley AFB, Va.

took up running about 7 years ago to combat the "after 40 spread." You know, that propensity we all have to pack on extra weight around age 40. Running is good for the bones and muscles, it's great for the heart, it builds up endurance, and it boosts my spirits, keeping me positive about life. I also like the fact that it doesn't require reserving a court, getting a partner, an instructor, etc., and it is something I can do all alone.

I would describe myself more as a jogger than as a runner. I shuffle my feet at a steady pace, snort, grunt, and sweat profusely. It's not a pretty sight! Walkers on the trails can hear me coming for a good quarter mile, but I don't care. I keep on plugging along with the pitter-patter of my big feet. Although I don't move in graceful, gazelle-like motions, I enjoy jogging and sure do miss it if I don't get a few jogs in each week. Because of my enthusiasm for this exercise, I've learned a thing or two that might help others interested in checking out this sport. The following personal experiences and considerations are a great place to start the Personal Risk Management (PRM) process for yourself:

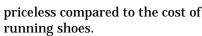
- 1. Consult a doctor before beginning any exercise regimen. It is important that you know your physical and health limits and not exceed them in your drive to get into shape.
- 2. Keep a journal of your jogging schedule. I do this for a couple

of reasons. It is a good way for me to track my results (i.e., times and distance). I also annotate what the weather was like, whether or not I felt I had a good run, any problems I encountered, etc. It also provides a history I can look back on to check my progress.

3. Always carry identification with you. I always keep identification and my health insurance card with me. I do this because I am new to the area, and it will help identify who I am to any passersby in the

event that I am injured.

4. Get a pair of good running shoes. The condition and health of your feet are very important. They get you where you need to go whether you are driving, walking, jogging, biking, hiking, skiing, etc., so invest in them by buying a pair of good running shoes. Over the years I have tried several different brands. I have liked some better than others, but the really crucial thing to remember about running shoes is to buy a new pair when the old pair begins to wear out or breakdown. Preserving healthy feet is



- 5. Know your limits. Don't run 3 miles the first time you go running. *Slowly* build up to a distance you can comfortably handle. When I first began to jog, I couldn't run around the track one full lap. This is where the sixth consideration is important.
- 6. Understand that running is not only a physically demanding sport, but it is one that has a mental twist to it. I wasn't able to run one lap when I started because I didn't believe I could. Now there are days when I tell myself that I





am only going to run 3 miles. As I set out on my run, I consider how I'm feeling and, if I am feeling pretty good, I tell myself that I can run 5 miles instead of 3. It's an ongoing conversation in my head. If it's too humid, or too cold, or too windy, I sometimes have to talk myself into sticking it out instead of cutting my run short.

7. Consider the weather conditions you will have to face. I admit it; I am a wimp when it comes to cold weather. I like the conditions to be perfect, but since I prefer to run outside, I try to be prepared for everything. In the winter, I make sure know the wind-

chill factor and usually lightly layer my clothing so I can peel off layers if I get too hot. Clothing that wicks the moisture away from the body This is important for the tendons and helps me avoid tendonitis. Warming up the muscles by walking before my run is also important to prevent muscle pulls. I cool down after my run to help stop any muscle cramping that might occur.

- 9. Stay hydrated when you are running. I personally carry a small bottle of water on my runs. Some may argue that it throws the body off balance somewhat, but I usually run where there are no water fountains so I carry water with me.
- 10. Plan your runs. Ask yourself a few questions such as: What is my goal for the run? How far do I want to go? Is the area I'm running in safe? Do your homework. I run on trails that can take me into some remote, wooded areas, but I always make sure that there are several vehicles in the parking lot before starting out. This indicates to me that there are many people on the trails. If I were to get injured, it wouldn't be too terribly long before someone would most likely come along to provide assistance. If I were to be accosted by a stranger out to do me harm, I could scream and know that help was within earshot.
- 11. Read up on any subject before you begin to take action. I subscribed to a running magazine a few years ago and really look forward to getting it each month. It has lots of great articles and tips on running and many personal stories of people who have overcome tremendous challenges in their

so that I too am still running well into my 80's.

- 12. Reconsider how you fuel your body. My diet has improved since I took up jogging. While my coworkers can still talk me into eating Mexican or Mongolian, I find that overall I think more about the foods I choose to eat. This was a gradual change that I believe happened because I realized that if I "pigged out" one day, I would just have to work harder burning it off the next day. This started me thinking about eating more nutritious foods (like fruits and vegetables) and drinking plenty of water.
- 13. Consider joining a running club. Now I am not really someone who is prone to do this and I can be pretty particular about what organizations I join, but I like my running club. It helps me stay focused and motivated about my running. They sponsor several runs throughout the year and also provide flyers for events sponsored by other local running clubs. I do not enter races to race per say, but I do enter them to run my own race. Our members come in all shapes, sizes, and ages. It's a great group of people that share my interest in living a healthy life.

I hope I have sparked some interest out there. If you do decide to add running to your workout regimen, be sure to use PRM to consider all the risk factors and hazards that are involved in your particular situation. It is just plain

It is important that you know your physical and health limits and not exceed them in your drive to get into shape.

is also essential. In the summer, I make sure I know the heat index and humidity levels before setting out.

8. Be sure to stretch, warm up, and cool down. I stretch for 10 minutes before and after I run.

lives by starting to exercise and run. My favorite articles are those that describe an 80-plus year old person who took up running at 64 and has just completed their umpteenth marathon. Those stories inspire me to take good care of myself

smart to use PRM to make sensible choices about your new exercise adventure. When you are safe, you are more able to have fun and enjoy your running experience. Who knows, maybe I'll see you on the trails!















FY02 Air	craft	As of March 1, 2002	
	Fatality	Class A	
8 AF		**	
9 AF		m-0	
12 AF	Ť	<u></u> <u>→</u> <u>+</u> <u>+</u>	
AWFC		★ ★ ↓ 10 · ↓ 10 ·	
ANG (ACC-gained)		+	
AFRC (ACC-gained)			

FY02 Ground As of March 1, 2002				
	Fatality	Class A	Class B	Class C
8 AF	1111	1	2	52
9 AF	†††	0	2	41
12 AF	ŤŤ	0	0	80
DRU	Ť	0	0	10

FY02 Weapons As of March 1, 200		
	Class A	Class B
8 AF	0	0
9 AF	0	0
12 AF	0	0
AWFC	0	1

Aircraft Notes

Congratulations on making February a zero flying Class A month! At the end of January, FY02 was beginning to look like it was going to be a bad year for mishaps. A mishap-free month may seem like an easy challenge, but with our current ops tempo it is not. Overseas deployments and Operation NOBLE EAGLE are taking a demanding toll, in hours, on our aircraft and people. This will require all of us to continue our vigilance and know when our aircraft or crews have had enough. When the mission gets real busy and the focus seems to shift away from operating safely to operating reactively, we all need to remember to take the time and ensure we are doing the mission safely.

Ground Notes

We are 5 months into FY02 and there have already been 11 Class A mishaps resulting in the deaths of 12 people and one Permanent Total Disability. Last year at this time, there were six Class A mishaps. This is almost a 50 percent increase! The main contributing factors continue to be lack of seat belt use, speed, and alcohol.

Weapons Notes

Personnel errors are on the rise. Supervisors should consider conducting periodic "re-familiarization training" with their personnel. Also, based on some of the findings of recent events, simple ORM assessments could eliminate some potential mishaps. Reminder, Safety and Quality Assurance inspectors should conduct some "full court presses" to see how units are performing operations.

Congratulations to ACC's newest member of the Top 3 Percent: SMSgt. Rodney Robinson!

Legend

Class A - Permanent Total Disability; Property Damage \$1,000,000 or more

Class B - Permanent Partial Disability; Property Damage between \$200,000 and \$1,000,000

Class C - Lost Workday; Property Damage between \$20,000 and \$200,000

* Non-rate Producing







TSgt. Delford J. Gainey, 820th RED HORSE Squadron, Nellis Air Force Base, Nev., tightens down the screws while installing a safety glass window in the front door of the newly constructed Mont Tout Community Center located in Grenada. The 820 RHS was tasked to construct a community center, barracks, and a school in this USSOUTHCOM-sponsored, humanitarian exercise.

